

IN THE CLAIMS

Please amend the claims as follows:

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1. (Currently Amended) A modem, comprising:
communication circuitry operable to facilitate communication over a communication link;
at least one capacitor operable to store a voltage when a power supply is supplying at least a threshold voltage to the modem;
at least one diode coupled between the power supply and the at least one capacitor, the diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage; and
a power loss sensor coupled in parallel with the diode and in series with the communication circuitry, the power loss sensor operable to detect a reverse bias state of the diode and to signal the communication circuitry to communicate a power loss signal over the communication link, the reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the modem.
 2. (Original) The modem of Claim 1, wherein the power loss sensor comprises a digital detector operable to detect the presence or absence of a voltage between the diode and the power supply.
 3. (Original) The modem of Claim 1, wherein the power loss sensor comprises:
a comparator having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor; and
a transistor coupled to an output of the comparator.
 4. (Original) The modem of Claim 1, wherein the power supply comprises a direct current power supply.
 5. (Original) The modem of Claim 1, further comprising a resistor coupled in series with the diode.

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6. (Original) The modem of Claim 1, further comprising a power supply circuit coupled in series with the diode, the power supply circuit operable to receive at least a portion of the threshold voltage from the power supply and to supply a voltage signal to the communication circuitry.

7. (Original) The modem of Claim 6, further comprising a power monitor coupled in series with the power supply circuit and in series with the communication circuitry, the power monitor operable to generate a reset signal when the voltage signal supplied by the power supply circuit to the communication circuitry falls outside an acceptable voltage range.

8. (Currently Amended) A system for power loss notification, comprising an apparatus operable to receive power from a power supply, the apparatus comprising:

at least one capacitor operable to store a voltage when the power supply is supplying at least a threshold voltage to the apparatus;

at least one diode coupled between the power supply and the at least one capacitor, the diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage; and

a power loss sensor coupled in parallel with the diode, the power loss sensor operable to detect a reverse bias state of the diode and to signal the apparatus to communicate a power loss signal to an external device, the reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the apparatus.

9. (Original) The system of Claim 8, wherein the power loss sensor comprises a digital detector operable to detect the presence or absence of a voltage between the diode and the power supply.

10. (Original) The system of Claim 8, wherein the power loss sensor comprises:
a comparator having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor; and
a transistor coupled to an output of the comparator.

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11. (Original) The system of Claim 8, wherein the power supply comprises a direct current power supply.

12. (Original) The system of Claim 8, further comprising a resistor coupled in series with the diode.

13. (Original) The system of Claim 8, further comprising a power supply circuit coupled in series with the diode, the power supply circuit operable to receive at least a portion of the threshold voltage from the power supply and to supply a voltage signal to the apparatus.

14. (Original) The system of Claim 13, further comprising a power monitor coupled in series with the power supply circuit, the power monitor operable to generate a reset signal when the voltage signal supplied by the power supply circuit falls outside an acceptable voltage range.

15. (Original) The system of Claim 8, wherein the power supply is integral with the apparatus.

16. (Currently Amended) The system of Claim 8, wherein the power loss ~~supply~~ sensor is operable to detect a reverse bias state of the diode and to signal communication circuitry to communicate a power loss signal over a communication link.

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17. (Currently Amended) A method for power loss notification, comprising:
receiving at least a threshold voltage from a power supply;
charging at least one capacitor when the power supply is supplying at least the threshold voltage;
failing to receive at least the threshold voltage from the power supply;
after failing to receive at least the threshold voltage, reverse biasing at least one diode coupled between the power supply and the at least one capacitor; and
detecting the reverse bias state of the diode at a power loss sensor coupled in parallel to the at least one diode;
detecting the reverse bias state of the diode using a power loss sensor coupled in parallel to the at least one diode and in series with the communication circuitry,

18. (Original) The method of Claim 17, wherein a digital detector detects the reverse bias state of the diode by detecting the presence or absence of a voltage between the diode and the power supply.

19. (Original) The method of Claim 17, wherein a power loss sensor detects the reverse bias state of the diode, the power loss sensor comprising:
a comparator having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor; and
a transistor coupled to an output of the comparator.

20. (Original) The method of Claim 17, wherein the power supply comprises a direct current power supply.

21. (Original) The method of Claim 17, wherein receiving at least a threshold voltage from a power supply comprises receiving at least a portion of the threshold voltage at a power supply circuit, the power supply circuit operable to generate a voltage signal.

22. (Original) The method of Claim 21, further comprising generating a reset signal when the voltage signal generated by the power supply circuit falls outside an acceptable voltage range.

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23. (Original) The method of Claim 17, further comprising communicating a power loss signal over a communication link in response to detecting the reverse bias state of the diode.

24. (Currently Amended) A modem, comprising:
communication circuitry operable to facilitate communication over a communication link;

at least one capacitor operable to store a voltage when a power supply is supplying at least a threshold voltage to the modem;

at least one diode coupled between the power supply and the at least one capacitor, the diode operable to operate in a forward bias state while the power supply is supplying at least the threshold voltage;

a power supply circuit coupled in series with the diode, the power supply circuit operable to receive at least a portion of the threshold voltage from the power supply and to supply a voltage signal to the communication circuitry;

a power monitor coupled in series with the power supply circuit and in series with the communication circuitry, the power monitor operable to generate a reset signal when the voltage signal supplied by the power supply circuit to the communication circuitry falls outside an acceptable voltage range; and

a power loss sensor coupled in parallel with the diode and in series with the communication circuitry, the power loss sensor operable to detect a reverse bias state of the diode and to signal the communication circuitry to communicate a power loss signal over the communication link, the reverse bias state of the diode indicating that the power supply has failed to supply the at least the threshold voltage to the modem, the power loss sensor comprising:

a comparator having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor; and

a transistor coupled to an output of the comparator.

M 25. (Currently Amended) A method for power loss notification, comprising:

- receiving at least a threshold voltage from a power supply at a modem;
- charging at least one capacitor when the modem is receiving at least the threshold voltage from the power supply;
- supplying a voltage signal to communication circuitry in the modem using at least a portion of the threshold voltage from the power supply;
- failing to receive at least the threshold voltage from the power supply;
- after failing to receive at least the threshold voltage, reverse biasing at least one diode coupled between the power supply and the at least one capacitor; and
- detecting the reverse bias state of the diode using a power loss sensor coupled in parallel to the at least one diode and in series with the communication circuitry, the power loss sensor comprising:
 - a comparator having a first input coupled between the power supply and the diode and a second input coupled between the diode and the at least one capacitor; and
 - a transistor coupled to an output of the comparator.